

IN THE CLAIMS:

Please cancel Claims 4, 8, 31, and 35 without prejudice to or disclaimer of the subject matter contained therein.

Please amend Claims 1-3, 5-7, 9-16, 18-20, 22-24, 26, 28-30, 32-34, 36-43, and 45, as follows. A marked-up version of Claims 1-3, 5-7, 9-16, 18-20, 22-24, 26, 28-30, 32-34, 36-43, and 45, showing the changes being made therein, is attached. Note that all claims currently pending in this application are being reproduced below for the Examiner's convenience.

1. (Amended) A control apparatus for enabling a user to control by spoken commands a function of a processor-controlled machine connectable to a speech processing apparatus, the control apparatus comprising:

receiving means for receiving dialog interpretable instructions derived from speech data processed by the speech processing apparatus;

device interface means for communicating with the processor-controlled machine to receive from the processor-controlled machine function information defining the functions available on that processor-controlled machine and dialog information defining a dialog compatible with the processor-controlled machine for enabling the control apparatus to cause the processor-controlled machine to carry out at least one of the available functions;

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dialog determining means for determining from the dialog information provided by the processor-controlled machine the dialog to be used for communicating with the processor-controlled machine;

dialog communication means for interpreting received dialog interpretable instructions using the determined dialog and for communicating with the processor-controlled machine using the determined dialog to enable information to be provided to the user in response to received dialog interpretable instructions, thereby enabling the user to conduct a spoken dialog with the processor-controlled machine; and

machine communication means for communicating with the processor-controlled machine to cause the processor-controlled machine to carry out a function defined by the function information in accordance with the spoken dialog conducted by the user with the processor-controlled machine.

2. (Amended) A control apparatus according to claim 1, wherein the control apparatus is connectable to a network and the dialog determining means is arranged to determine the location on the network of the determined dialog.

3. (Amended) A control apparatus according to claim 1, further comprising storing means for causing the determined dialog to be stored in a dialog store of the control apparatus.

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5. (Amended) A control apparatus comprising a JAVA virtual machine for enabling a user to control by spoken commands a function of a processor-controlled machine

connectable to a speech processing apparatus, the JAVA virtual machine comprising:

receiving means for receiving dialog interpretable instructions derived from speech processed by the speech processing apparatus;

device identifying means for receiving information from the processor-controlled machine relating to a device class of the processor-controlled machine, for determining from the device class the dialog to be used with that processor-controlled machine, and for using the JAVA reflection API to determine from the device class information regarding the functions available on that processor-controlled machine,

dialog communication means for interpreting the received dialog interpretable instructions using the determined dialog;

dialog communicating means for communicating with the processor-controlled machine using the determined dialog to enable information to be provided to the user in response to the received dialog interpretable instructions, thereby enabling the user to conduct a spoken dialog with the processor-controlled machine; and

machine communication means for communicating with the processor-controlled machine to cause the processor-controlled machine to carry out at least one function determined from the device class to be available on the processor-controlled machine in accordance with the spoken dialog conducted by the user with the processor-controlled machine.

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6. (Amended) A control apparatus according to Claim 5, wherein the control apparatus is connectable to a network and the dialog identifying means is arranged to determine from the device class the location on the network of the dialog for the processor-controlled machine.

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7. (Amended) A control apparatus according to claim 5, further comprising storing means for causing the determined dialog to be stored in a dialog store of the control apparatus.

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9. (Amended) A control apparatus for enabling a user to control by spoken commands a function of a processor-controlled machine connectable to a speech processing apparatus, the control apparatus comprising a JAVA virtual machine having:

receiving means for receiving dialog interpretable instructions derived from speech data processed by the speech processing apparatus;

device interface means for receiving from the processor-controlled machine information identifying and representing the device class for the processor-controlled machine;

dialog determining means for determining from the information provided by the processor-controlled machine a dialog to be used for communicating with the processor-controlled machine;


function determining means for using a JAVA reflection API to determine from the device class information regarding functions available on the processor-controlled machine;

dialog communication means for interpreting received dialog interpretable instructions using the determined dialog and for communicating with the processor-controlled machine using the determined dialog to enable information to be provided to the user in response to the received dialog interpretable instructions; and

machine communication means for communicating with the processor-controlled machine to carry out at least one function determined from the device class to be available on the processor-controlled machine in accordance with spoken dialog conducted by the user with the processor-controlled machine.

10. (Amended) A control apparatus according to claim 5, having a job listener registering means for registering a job listener to receive from the processor-controlled machine information relating to events occurring at the processor-controlled machine.


11. (Amended) A control apparatus according to claim 1, wherein a dialog has a number of dialog states and the dialog communication means is arranged to control the dialog state in accordance with the received dialog interpretable instructions.

12. (Amended) A control apparatus according to claim 1, wherein the dialog communication means is arranged to supply to the speech processing apparatus

information relating to speech recognition grammar to be used for processing speech data in accordance with a dialog state.

13. (Amended) A control apparatus according to claim 1, further comprising audio data receiving means for receiving speech data and audio data transmitting means for transmitting received speech data to the speech processing apparatus.

14. (Amended) A control apparatus according to claim 1, further comprising network interface means for communicating with the speech processing apparatus over a network.

15. (Amended) A control apparatus according to claim 1, comprising network interface means for communicating with the processor-controlled machine over a network.

16. (Amended) A control apparatus according to claim 1, comprising remote communication means for communicating with at least one of the speech processing apparatus and the processor-controlled machine.

17. (Unamended) A control device comprising a control apparatus according to claim 1 and an audio input device.

(Handwritten Mark) 18. (Amended) A voice-control controller comprising a control apparatus

in accordance with claim 1 and a speech processing apparatus comprising:

speech recognizing means for recognizing speech in received audio data using

speech recognition grammar;

speech interpreting means for interpreting recognized speech to provide dialog

interpretable instructions; and

transmitting means for transmitting the dialog interpretable instructions to the dialog communication means.

19. (Amended) A processor-controlled machine arranged to be connected

to a control apparatus in accordance with claim 1, wherein the processor-controlled machine

comprises:

machine control circuitry for carrying out at least one function;

storing means for storing information relating to a device class defining a dialog to be used with the processor-controlled machine and functions available on the machine;

a processor for controlling the machine control circuitry; and

means for providing said information to the control apparatus for enabling the dialog determining means to determine the dialog to be used with the processor-controlled machine.

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20. (Amended) A processor-controlled machine arranged to be connected to a control apparatus in accordance with claim 5, wherein the processor-controlled machine comprises:
machine control circuitry for carrying out at least one function;
storing means for storing a device class for the processor-controlled machine, the device class defining a dialog to be used with the processor-controlled machine and functions available on the machine;
a processor for controlling the machine control circuitry; and
means for supplying the device class to the control apparatus.

21. (Unamended) A processor-controlled machine according to claim 19, capable of providing at least one of photocopying, facsimile and printing functions.

22. (Amended) A processor-controlled machine according to claim 19, comprising at least one of:

a television receiver, a video cassette recorder, a microwave oven, a digital camera, a printer, a photocopier, a facsimile machine, a lighting system, and a heating system.

23. (Amended) A device connectable to a network comprising a processor-controlled machine in accordance with claim 19.

24. (Amended) A device according to claim 23, wherein the device or the control apparatus is integrated with the processor-controlled machine.

25. (Unamended) A device according to claim 23, comprising a separate audio input device.

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26. (Amended) A system comprising a plurality of devices in accordance with claim 23, and a speech processing apparatus connectable to the devices via a network, said system comprising:

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means for receiving audio data representing speech by a user;
speech recognition means for recognizing speech in the received audio data;
speech interpreting means for interpreting the recognized speech to provide the dialog interpretable instructions; and
transmitting means for transmitting the dialog interpretable instructions over the network to at least one of said devices.

27. (Unamended) A system according to claim 26, further comprising a look-up service connectable to the network.

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28. (Amended) A method of enabling a user to control by spoken commands a function of a processor-controlled machine connectable to a speech processing apparatus, the method comprising a control apparatus carrying out the steps of:
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receiving dialog interpretable instructions derived from speech data processed by the speech processing apparatus;

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communicating with the processor-controlled machine to receive from the processor-controlled machine function information defining functions available on the processor-controlled machine and dialog information defining a dialog compatible with the processor-controlled machine for enabling the control apparatus to cause the processor-controlled machine to carry out at least one of the available functions in accordance with a spoken command;

determining from the dialog information provided by the processor-controlled machine a dialog to be used for communicating with the processor-controlled machine;

interpreting received dialog interpretable instructions using the determined dialog and communicating with the processor-controlled machine using the determined dialog to enable information to be provided to the user in response to the received dialog interpretable instructions, thereby enabling the user to conduct a spoken dialog with the processor-controlled machine; and

communicating with the processor-controlled machine to cause the processor-controlled machine to carry out a function defined by the function information in accordance with the spoken dialog conducted by the user with the processor-controlled machine.

29. (Amended) A method according to claim 28, further comprising the step of determining the location on a network of a file for the dialog.

30. (Amended) A method according to claim 28, further comprising the step of storing the dialog in a dialog store of the control apparatus.

31. CANCELLED

32. (Amended) A method in a control apparatus comprising a JAVA virtual machine for enabling a user to control by spoken commands a function of a processor-controlled machine connectable to a speech processing apparatus, the method comprising the steps of:

receiving dialog interpretable instructions derived from speech processed by the speech processing apparatus;

receiving information from the processor-controlled machine relating to a device class of the processor-controlled machine;

determining from the device class the dialog to be used with the processor-controlled machine;

using a JAVA reflection API to determine from the device class information, functions available on the processor-controlled machine;

interpreting received dialog interpretable instructions using the determined dialog;

communicating with the processor-controlled machine using the determined dialog to enable information to be provided to the user in response to received dialog interpretable instructions, thereby enabling the user to conduct a spoken dialog with the processor-controlled machine; and

communicating with the processor-controlled machine to cause the processor-controlled machine to carry out at least one function determined from the device class to be

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available on the processor-controlled machine in accordance with the spoken dialog conducted by the user with the processor-controlled machine.

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33. (Amended) A method according to claim 32, further comprising the step of determining from the device class the location on a network of a file for the dialog for the processor-controlled machine.

34. (Amended) A method according to claim 32, further comprising the step of storing the dialog in a dialog store of the control apparatus.

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36. (Amended) A method according to claim 28, wherein the determined dialog has a number of dialog states and the dialog state is controlled in accordance with the received dialog interpretable instructions.

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37. (Amended) A method according to claim 28, wherein information relating to speech recognition grammar to be used for processing speech data is supplied to the speech processing apparatus in accordance with a dialog state.

38. (Amended) A method according to claim 28, further comprising the step of receiving speech data and transmitting received speech data to the speech processing apparatus.

39. (Amended) A method according to claim 28, further comprising the step of communicating with the speech processing apparatus over a network.

40. (Amended) A method according to claim 28, further comprising the *AD* step of communicating with the processor-controlled machine over a network.

41. (Amended) A method according to claim 28, further comprising the step of communicating via a remote communication link with at least one of the speech processing apparatus and the processor-controlled machine.

42. (Amended) A method in a control apparatus comprising a JAVA virtual machine for enabling a user to control by spoken commands a processor-controlled machine connectable to a speech processing apparatus, the method comprising the steps of:

receiving from the processor-controlled machine information identifying and representing a device class for the processor-controlled machine;

determining from the information provided by the processor-controlled machine a dialog to be used for communicating with the processor-controlled machine;

using the JAVA reflection API to determine, from the device class information, functions available on the processor-controlled machine;

receiving dialog interpretable instructions derived from speech data processed by the speech processing apparatus;

interpreting, using the dialog compatible with the processor-controlled machine, received dialog interpretable instructions;

communicating with the processor-controlled machine using the dialog to enable information to be provided to the user in response to the received dialog interpretable instructions, thereby enabling the user to conduct a spoken dialog with the processor-controlled machine; and

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communicating with the processor-controlled machine to cause the processor-controlled machine to carry out at least one function determined from the device class to be available on the processor-controlled machine in accordance with the spoken dialog conducted by the user with the processor-controlled machine.

43. (Amended) A computer program product comprising processor implementable instructions for configuring a processor to provide a control apparatus in accordance with claim 1.

44. (Unamended) A computer program product comprising processor implementable instructions for configuring a processor to carry out a method in accordance with claim 28.